

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application;

--1. (Currently Amended) A battery charging/discharging apparatus for determining a remaining capacity of a battery, comprising:

measuring means for measuring a standby time during which the battery is in a standby mode;

correction value calculating means for calculating a correction value for the remaining capacity of the battery based on the standby time measured by said measuring means;
[[and]]

correcting means for correcting a present remaining capacity value of the battery based on the correction value calculated by said correction value calculating means[[.]]; and

determining means for determining whether the standby time has reached a predetermined time,

wherein said correction value calculating means calculates the correction value for the remaining capacity of the battery at a predetermined time interval based on a result of said determining means.

--2. (Cancelled)

--3. (Currently Amended) A battery charging/discharging method of a battery charging/discharging apparatus for

determining a remaining capacity of a battery, said battery charging/discharging method comprising the steps of:

measuring a standby time during which the battery is in a standby mode;

calculating a correction value for the remaining capacity of the battery based on the standby time measured in the measuring step; [[and]]

correcting a present remaining capacity value of the battery based on the correction value calculated in the calculating step_{[[.]]}; and

determining whether the standby time has reached a predetermined time,

wherein said step of calculating a correction value calculates the correction value for the remaining capacity of the battery at a predetermined time interval based on a result of said determining step.

--4-6. (Cancelled)

--7. (Currently Amended) Apparatus for determining a remaining capacity of a battery, the apparatus comprising:

a cell voltage detector for detecting a cell voltage;

a microcomputer for calculating a remaining battery capacity value based on a detected cell voltage from the cell voltage detector;

a memory for storing the remaining battery capacity value calculated by the microcomputer; and

a timer under control of the microcomputer for counting

time,

wherein when the battery is in a standby mode the microcomputer sets itself in a sleep mode and starts the timer and when determines that the battery shifts from the standby mode to has been in a charge/discharge mode within a predetermined time as counted by the timer is stopped and an elapsed standby time is read out from the timer to the microcomputer, and wherein the microcomputer calculates a correction value based on the elapsed standby time read from the timer, wherein the cell voltage is detected by the cell voltage detector and the remaining battery capacity is read out from the memory and used compared by the microcomputer along with the correction value to calculate with the newly detected cell voltage and when the remaining battery capacity value is greater, the newly detected cell voltage is used as an up-to-date remaining battery capacity value that is then stored in the memory.

--8. (Currently Amended) A method employing a microcomputer for determining a remaining capacity of a battery, the method comprising the steps of:

detecting a battery voltage and storing the detected voltage as a remaining battery capacity value in a memory of the microcomputer;

first determining whether the battery has not been in a charge/discharge mode [[for]] within a predetermined period of time as counted by a timer;

~~start measuring a standby time and set the microcomputer in a sleep mode upon a determination in the step of first determining that the battery has not been in the charge/discharge mode within the predetermined period of time, newly detecting the battery voltage;~~

~~second determining whether the battery is placed in the charge/discharge mode following the step of start measuring;~~

~~stop measuring the standby time and provide the measured standby time to the microcomputer upon a determination in the second determining step that the battery is placed in the charge/discharge mode;~~

~~calculating a remaining capacity correction value using the measured standby time;~~

~~calculating an up-to-date remaining capacity value using the remaining capacity correction value and a previously calculated remaining capacity value read out from a memory of the microcomputer.~~

reading the remaining battery capacity value from the memory;

comparing the read-out remaining battery capacity value with the newly detected battery voltage;

upon a comparison result that the read-out remaining battery capacity value is greater, using the newly detected battery voltage as an updated remaining battery capacity value; and

replacing the remaining battery capacity value stored in the memory with the updated remaining battery capacity value.